January 29, 2002

Mr. Carl Kelley
Superior Aluminum Alloys
14214 Edgerton Road
New Haven, Indiana 46774

Re: Significant Source Modification No:
003-14739-00286

Dear Mr. Kelley:

Superior Aluminum Alloys applied for a Part 70 operating permit on October 15, 1999 for a secondary aluminum manufacturing operation. An application to modify the source was received on August 8, 2001. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(a) One (1) natural gas-fired reverbatory furnace, identified as furnace #1, which replaces existing reverbatory furnace #1 with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

(b) One (1) natural gas-fired reverbatory furnace, identified as furnace #2, which replaces existing reverbatory furnace #2, with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Pring, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7840 to speak directly to

Mr. Pring. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
ERG/MP

cc: File - Allen County
U.S. EPA, Region V
Allen County Health Department
Air Compliance Section Inspector - Jennifer Dorn
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Superior Aluminum Alloys
14214 Edgerton Road
New Haven, Indiana 46774

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 003-14739-00286	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 29, 2002

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Quality (IDEM), Office of Air Quality (OAQ) . The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary secondary aluminum smelting operation.

Responsible Official:	Denny Luma, President
Source Address:	14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address:	14214 Edgerton Road, New Haven, Indiana 46774
SIC Code:	3314
County Location:	Allen
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source under PSD; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) One (1) natural gas-fired reverbatory furnace, identified as furnace #1, which replaces existing reverbatory furnace #1 with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

(b) One (1) natural gas-fired reverbatory furnace, identified as furnace #2, which replaces existing reverbatory furnace #2, with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22); and

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.

(2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.

(3) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner OAQ makes a request for records

to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment is in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.11 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within “normal” parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.13 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize

excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) natural gas-fired reverbatory furnace, identified as furnace #1, which replaces existing reverbatory furnace #1 with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

(b) One (1) natural gas-fired reverbatory furnace, identified as furnace #2, which replaces existing reverbatory furnace #2, with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]

The following conditions apply to Reverbatory Furnaces #1 through #4 and Rotary Furnace M:

(a) The combined input of aluminum scrap to reverbatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per twelve consecutive month period. This aluminum feed/charge limit, in combination with the unlimited NO_x emission rate from the Rotary Furnace and unlimited NO_x emissions from the Scrap Dryer, and Melt Pots, will effectively limit the source's potential to emit nitrogen oxides (NO_x) to less than 100 tons per twelve (12) consecutive month period.

(b) NO_x emissions from each of the reverbatory furnaces #1, #2, #3, and #4 shall not exceed 0.25 pounds per ton of aluminum charged and 0.01 pounds per ton of aluminum poured/cast.

(c) The amount of flux used shall be limited to 11,205,135 pounds per furnace per twelve consecutive month period.

(d) The PM emissions from each furnace (Reverbatory Furnaces #1 through #4 and Rotary Furnace M) shall not exceed 0.1 pounds per ton of aluminum melted.

(e) The PM10 emissions from each furnace (Reverbatory Furnaces #1 through #4 and Rotary Furnace M) shall not exceed 0.1 pounds per ton of aluminum melted.

Compliance with these limits render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to reverberatory furnaces #1 and #2 except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.1.3 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]

Pursuant to 40 CFR Part 63.1505, the following conditions shall apply to the reverberatory furnaces #1 and 2. The Permittee shall be in compliance with the following emission limitations and operating requirements upon startup:

(a) The Permittee shall comply with the following emission limitations:

(1) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{cPM} = \frac{\sum_{i=1}^{n} \left(L_{tiPM} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiPM} = The PM emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(1) and (2) of 40 CFR 63.1505.
T_{ti} = The feed/charge rate for individual emission unit I; and
L_{cPM} = The PM emission limit for secondary aluminum processing unit I.

The PM emission limit (L_{cPM}) for a Group 1 furnace without an in-line fluxer (each reverbatory furnace and Rotary Furnace M) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(2) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl in excess of:

$$L_{cHCl} = \frac{\sum_{i=1}^{n} \left(L_{tiHcl} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiHCl} = The HCl emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(4) of 40 CFR 63.1505.
T_{ti} = The feed/charge rate for individual emission unit I; and
L_{cHCl} = The HCl emission limit for secondary aluminum processing unit I.

The HCl emission limit (L_{cHCl}) for a Group 1 furnace without an in-line fluxer (each reverbatory furnace) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(3) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^{n} \left(L_{tiDF} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiDF} = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and
L_{cDF} = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit (L_{cDF}) for a Group 1 furnace without an in-line fluxer (Reverbatory Furnaces #1 and #2) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg (2.1 x 10^{-4} gr of D/F TEQ per ton)per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update". [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(b) Identification, emission limits and means of compliance shall be posted on the reverberatory furnaces #1 and #2.

D.1.4 Labeling [40 CFR Part 63.1506(b)]

The owner or operator shall provide and maintain easily visible labels that shall be posted at the furnaces. Said labels shall identify the applicable emission limits and means of compliance, including:

(a) the type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer); and

(b) the applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

D.1.5 Capture and Control Systems [40 CFR Part 63.1506(c)]

Pursuant to 40 CFR 63.1506(c), the owner or operator of the furnaces must:

(a) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference: 40 CFR 63.1502)

(b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and

(c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

D.1.6 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each furnace a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority for review and approval as part of the application for a part 70 or part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

(a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

(b) A monitoring schedule for each affected source and emission unit.

(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.

(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and

(2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.

(e) Procedures for monitoring process and control device parameters, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

(f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph 63.1510(b)(1), including:

(1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and

(2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.

(g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.1.7 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) emissions from each of the reverberatory furnaces #1 and #2 shall not exceed 24.0 pounds per hour when operating at a process weight rate of 14.0 tons of metal per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these facilities and their baghouses. If the OM&M plan required by condition D.1.6 is developed in accordance with Section C - Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

Compliance Determination Requirements

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63 Subpart RRR]

(a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the Permittee shall, within 60 days after achieving maximum production but no later than 180 days after startup, perform PM and PM10 testing on baghouses E and F, and NO_x, HCl, and D/F testing on Reverberatory furnaces #1 and #2, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. When testing baghouses E and F, reverberatory furnaces #1 and #2 shall be operated at 95% or more of their maximum design capacities. The PM and PM10 testing shall also satisfy the PM and PM10 testing requirements for baghouses E and F as required by Condition D.1.6 of permit #003-11927-00286. PM10 includes filterable and condensible PM10. Testing shall be conducted in accordance with Section C- Performance Testing. These tests shall be repeated every two and one-half (2.5) years.

(b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [63.1511(g)].

D.1.10 Particulate Matter (PM) and Capture/Collection Systems [40 CFR 63.1506(c)]

In order to comply with Conditions D.1.1, D.1.3, D.1.5, and D.1.7, the capture/control system (baghouses) for PM control shall be in operation and control emissions from the furnaces at all times that the furnaces are in operation according to the procedures and requirements of the OM&M plan. It is acceptable to operate only one of the baghouses E or F if only one of the two reverberatory furnaces #1 and #2 is operating. If both reverbatory furnaces #1 and #2 are operating, then both baghouses E and F must be operated.

D.1.11 Feed/Charge Determination [40 CFR 63.1506(d)]

Pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

D.1.12 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to reverberatory furnaces #1 and #2:

(a) For each furnace, the Permittee shall [63.1506(m)]:

(1) Initiate corrective action within one (1) hour of a bag leak detection system alarm; complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and operate each fabric filter system such that

the bag leak detection system alarm does not sound more than five (5) percent of the operating time during a six (6) month reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.

(2) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus 25 degrees F.

(3) For a continuous-lime injection system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.

(4) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

(b) For each furnace, the Permittee shall [40 CFR 63.1510(i)]:

(1) Verify that the lime (or other alkaline agent) is always free-flowing by: Inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period.

(2) The Permittee shall also record the feeder setting once each day of operation.

(c) Pursuant to 40 CFR 63.1510(j), for all furnaces at this source, the Permittee shall [40 CFR 63.1510(j)]:

(1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

(2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).

(3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.

(4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.

(d) An owner or operator of a secondary aluminum processing unit at a facility must include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information [40 CFR 63.1510(s)(1)]:

(1) The identification of each emission unit in the secondary aluminum processing unit;

(2) The specific control technology of pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;

(3) The emission limit calculated for each secondary aluminum processing unit and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;

(4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and

(5) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).

(e) The SAPU compliance procedures within the OM&M plan may not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.13 Labeling [40 CFR 63.1510(c)]

The owner or operator shall, for each furnace, inspect the labels required in Condition D.1.4 at least once per calendar month to confirm that the posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible.

D.1.14 Capture/Collection System [63.1510(d)]

The owner or operator shall, for the furnaces, inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection.

D.1.15 Feed/Charge Determination [40 CFR 63.1510(e)]

The owner or operator of the furnaces must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be $\pm$1 percent of the weight being measured.

D.1.16 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]

These requirements apply to the owner or operator of each reverbatory furnace listed in this section.

(a) The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.

(b) Each triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997).

(c) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(d) The bag leak detection system sensor must provide output of relative or absolute PM loadings.

(e) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(f) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(g) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(i) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(j) Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

D.1.17 Fabric Filter Inlet Temperature Monitoring Requirements [40 CFR 63.1510(h)]

(a) The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases entering baghouses E and F consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.

(b) The temperature monitoring device must meet each of these performance and equipment specifications:

(1) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

(2) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n).

(3) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

D.1.18 Corrective Action [40 CFR 63.1506(p)]

When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established and incorporated in the OM&M plan, the owner or operator shall initiate corrective action. The corrective action taken, shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

D.1.19 Compliance Monitoring Requirements [40 CFR 63.1510(t)] [40 CFR 63.1510(u)]

Pursuant to 40 CFR 63, Subpart RRR, on or after the date of the initial performance test is required to be completed, the Permittee shall monitor the furnaces 1 and 2 and control equipment according to the following requirements [63.1510(a)]:

(a) The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of PM, HCl, and D/F for each of the furnaces 1 and 2 on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall:

(1) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight data collected as required under Subpart RRR.

(2) To provide emissions for each furnace for the 24-hour period, in pounds: multiply the total feed/charge weight to the emission unit or the weight of aluminum produced by the emission unit for the 24-hour period, by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the emission test)

(3) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.

(b) As an alternative to the procedures in (a)(1) above, the Permittee may demonstrate through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limit [40 CFR 63.1510(u)].

D.1.20 Parametric Monitoring

The Permittee shall record the total static pressure drop across baghouses E and F, used in conjunction with the furnaces, at least once per shift when any of the furnaces are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.21 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the furnaces when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.22 Broken or Failed Bag Detection

In the event that bag failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.23 Record Keeping Requirements

(a) To document compliance with D.1.1, the Permittee shall maintain records of the total charge weight and flux charged to each reverbatory furnace for each month.

(b) To document compliance with Condition D.1.20, the Permittee shall maintain records of the inlet and outlet differential static pressure once per shift during normal operation when venting to the atmosphere

(c) To document compliance with Condition D.1.21, the Permittee shall maintain records of the results of the inspections required under Condition D.1.21.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.24 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1517 the owner or operator shall:

(a) As required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.

(b) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

(c) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator of a furnace with a lime-injected fabric filter must maintain records of:

(1) The number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.

(2) The following regarding lime injection:

Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken;

(3) For reverbatory furnaces 1 and 2, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(4) For each continuous monitoring system, records required by 40 CFR 63.10(c).

(5) For each furnace, weights for each operating cycle or time period used in the performance test.

(6) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(7) Records of annual inspections of emission capture/collection and closed vent systems.

(8) Records for any approved alternative monitoring or test procedure.

(9) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(i) Startup, shutdown, and malfunction plan;

(ii) For major sources, OM&M plan; and

(iii) Site-specific secondary aluminum processing unit emission plan.

(10) For each furnace, records of total charge weight for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

D.1.25 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1510 and 63.1516 the owner or operator shall:

(a) Submit initial notifications, upon startup, to the applicable permitting authority as described below.

(1) The owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

(2) The owner or operator must provide additional notifications for sources with continuous emission monitoring systems.

(b) Each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

(1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).

(2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).

(3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.

(4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

(5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).

(6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).

(7) Approved OM&M plan.

(8) Startup, shutdown, and malfunction plan, with revisions.

(c) The owner or operator must develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of

startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:

(1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and

(2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

(d) The owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

A report must be submitted if any of these conditions occur during a 6-month reporting period:

(1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.

(2) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).

(3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).

(4) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.

(5) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

(e) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

(f) For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:

(1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and

(2) All monitoring, Record keeping, and reporting requirements were met during the year.

D.1.26 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30)

days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Superior Aluminum Alloys
Source Address: 14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address: 14214 Edgerton Road, New Haven, Indiana 46774
Source Modification No.: 003-14739-00286

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Superior Aluminum Alloys
Source Address: 14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address: 14214 Edgerton Road, New Haven, Indiana 46774
Source Modification No.: 003-14739-00286
Facility: Reverbatory Furnaces #1, 2, 3, and 4
Parameter: Aluminum scrap throughput
Limit: 300,000,000 pounds per rolling 12 consecutive month period

YEAR: _____

Month	Aluminum Scrap Throughput (pounds)	Aluminum Scrap Throughput (pounds)	Aluminum Scrap Throughput (pounds)
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Superior Aluminum Alloys
Source Address: 14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address: 14214 Edgerton Road, New Haven, Indiana 46774
Source Modification No.: 003-14739-00286
Facility: Four Reverbatory Furnaces (Furnaces #1 through #4)
Parameter: Amount of flux material fed
Limit: 11,205,135 pounds per furnace per twelve consecutive month period

YEAR: _____

Month	Furnace	Column 1	Column 2	Column 1 + Column 2
		This Month	Previous 11 Months	12 Month Total
Month 1	Furnace 1			
	Furnace 2			
Month 2	Furnace 1			
	Furnace 2			
Month 1	Furnace 1			
	Furnace 2			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	Superior Aluminum Alloys
Source Location:	14214 Edgerton Road, New Haven, Indiana 46774
County:	Allen
SIC Code:	3314
Operation Permit No.:	T 003-11452-00286
Operation Permit Issuance Date:	Not yet issued
Significant Source Modification No.:	003-14739-00286
Permit Reviewer:	ERG/MP

On December 27, 2001, the Office of Air Quality (OAQ) had a notice published in the Fort Wayne Journal Gazette in Fort Wayne, Indiana, stating that Superior Aluminum Alloys had applied for a Part 70 Significant Source Modification to replace reverbatory furnaces #1 and #2 with identical furnaces of the same size and capacity. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified to reflect these changes.

1. In C.12 (c)(2) “administrative amendment” has been revised to “minor permit modification”, because 326 IAC 2-7-11(a)(7) has been repealed.

C.12 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for ~~an administrative amendment~~ **a minor permit modification** to the permit, and such request has not been denied.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Part 70 Significant Source Modification

Source Background and Description

Source Name:	Superior Aluminum Alloys
Source Location:	14214 Edgerton Road, New Haven, Indiana 46774
County:	Allen
SIC Code:	3314
Operation Permit No.:	T 003-11452-00286
Operation Permit Issuance Date:	Not yet issued
Significant Source Modification No.:	003-14739-00286
Permit Reviewer:	ERG/MP

The Office of Air Quality (OAQ) has reviewed a modification application from Superior Aluminum Alloys relating to the construction of the following emission units and pollution control devices:

(a) One (1) natural gas-fired reverbatory furnace, identified as furnace #1, which replaces existing reverbatory furnace #1 with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

(b) One (1) natural gas-fired reverbatory furnace, identified as furnace #2, which replaces existing reverbatory furnace #2, with a maximum charging capacity of 28,000 pounds of aluminum scrap per hour, a maximum heat input capacity of 28 (MMBTU/hr), and a maximum chlorine flux of 10,233 pounds per eight-hour charge, with emissions controlled by either of existing baghouses E or F, both equipped with continuous lime injection and exhausting to stack E or F.

History

On August 8, 2001, Superior Aluminum Alloys submitted an application to the OAQ requesting to replace reverbatory furnaces #1 and #2 with identical furnaces of the same size and capacity. These replacements are needed due to premature failure of the existing furnaces and will not result in increased utilization or increased capacity. Superior Aluminum Alloys applied for a Part 70 permit on October 15, 1999.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (scfm)	Temperature (^{0}F)
E	Reverbatory Furnaces #1 and 2	40	3.83	43,800	125
F	Reverbatory Furnaces #1 and 2	40	3.83	37,120	125

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 8, 2001. An interim construction petition (003-14739I-00286) was approved on December 3, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 5).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	6,129
PM-10	3,298
SO_2	13.5
VOC	32
CO	20.6
NO_x	44

HAP's	Potential To Emit (tons/year)
Antimony	0.34
Arsenic	0.08
Berylium	0.01
Cadmium	0.12
Chlorine	0.37
Chromium	0.14
Formaldehyde	0.02
Hexane	0.44
Hydrogen Chloride	57.64
Lead	0.79
Manganese	0.41

HAP's	Potential To Emit (tons/year)
Mercury	0.03
Nickel	0.09
Selenium	0.04
Polychlorinated dibenzofurans total	$3.98x10^{-5}$
Polychlorinated dibenzo-p-dioxins total	$3.98x10^{-5}$
TOTAL	60.07

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification as the source is requesting limits to maintain minor source status relative to PSD rules. This modification is also being performed pursuant to 326 IAC 2.7-10(F)(4) as the potential to emit of PM-10 is greater than 25 tons per year. This Significant Source Modification is approval to construct and operate the new Furnaces #1 and #2.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Allen County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	34.97
PM-10	34.97
SO_2	89.92
VOC	52.14
CO	8.07
NOx	93.92

This existing source is not a major stationary source because even though it is one of the 28 listed source categories, each attainment regulated pollutant is limited to an emission rate of less than 100 tons per year.

(a) These emissions are based upon technical support document for permit CP-003-9243-00286 issued May 1, 1998.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
reverbatory furnace #1 and #2 charge and melt	3.75*	3.75*	9.3	12.3	0.00	18.75**	<13
reverbatory furnace #1 and #2 holding	1.86	1.86	0.15	1.35	20.6	12.26	<0.6
reverbatory furnace #1 and #2 casting	0.00	0.00	2.1	14.4	0.00	1.0	0.00
reverbatory furnace #1 and #2 fluxing	3.75*	3.75*	0.00	0.00	0.00	0.00	0.00
Total for new reverbatory furnace #1 and #2	3.75*	3.75*	11.55	28.05	20.6	38.96	<13
Total for entire source	<100	<100	<100	<100	<100	<100	

* Limited PM emissions based on grain loading and flow rate data from stack tests.
** PSD limit for all four furnaces.

This modification to an existing minor stationary source is not major because the entire source is being maintained to be PSD minor. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) The reverbatory furnaces #1 and #2 are subject to the National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production, 40 CFR 63.1500 (Subpart RRR), 326 IAC 14, and 326 IAC 20-1-1. Pursuant to 40 CFR 63 subpart RRR, and 326 IAC 20-1-1, the secondary aluminum production operations are subject to the following conditions:

Emission Limits

(1) On or after the date of approval of the Operation, Maintenance and Monitoring Plan, the Permittee shall comply with the following emission limitations:

(A) The PM emission limit (L_{cPM}) for a Group 1 furnace without an in-line fluxer (each reverbatory furnace) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(B) The HCl emission limit (L_{cHCl}) for a Group 1 furnace without an in-line fluxer (each reverbatory furnace) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(C) The D/F emission limit (L_{cDF}) for a Group 1 furnace without an in-line fluxer (Reverbatory Furnaces #1 and #2) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton)per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update”. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

Operating Requirements

(1) The Permittee shall provide and maintain easily visible labels at each affected unit that identifies the applicable emission limit and means of compliance [63.1506(b)]. The labels shall include:

(A) The type of affected emission unit (i.e., Group 1 Furnace); and

(B) The applicable operational standard and control method, including the type of charge to be used in the furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance, and Monitoring Plan.

(2) Each affected unit shall be equipped with a capture and collection system that meets the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice.” Captured emissions shall be vented through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter. The capture/collection system shall be operated according to the procedures and requirements in the Operation, Maintenance, and Monitoring Plan [63.1506(c)].

(3) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. [40 CFR 63.1506(d)]

(4) For each affected unit, the Permittee shall comply with the following requirements [63.1506(m)]:

(A) Regarding the use of bag leak detection systems. The Permittee shall:

(i) Initiate corrective action within one (1) hour of a bag leak detection system alarm;

(ii) Complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and

(iii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5) percent of the operating time during a six (6) month reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.

(B) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus 25 degrees F.

(C) For a continuous-lime inject system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.

(D) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

(5) When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [63.1506(p)].

Monitoring Requirements

(1) On or after the date of the initial performance test is required to be completed, the Permittee shall monitor all emission units and control equipment according to the following requirements [63.1510(a)]:

The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall [63.1510(t)]:

(A) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight data collected as required under Subpart RRR. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.

(B) Multiply the total feed/charge weight to the emission unit, or the weight to the emission unit, or the weight of aluminum produced by the emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the emission test) to provide emissions for each emission unit for the 24-hour period, in pounds.

(C) Divide the total emissions for each secondary aluminum processing unit for the 24-hour period by the total material charged to the secondary aluminum processing unit, or the total weight of aluminum produced by the secondary aluminum processing unit over the 24-hour period to provide the daily emission rate for the secondary emission unit.

(D) Compute the 24-hour daily emission rate using the equation:
Where,

$$E_{day} = \frac{\sum_{i=1}^{n} \left(T_{ix} ER_i \right)}{\sum_{i=1}^{n} T_i}$$

E_{day} = The daily respective PM, HCl, or D/F emission rate for the secondary aluminum processing unit for the 24-hour period;
T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period in tons;
ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or ug/Mg or feed/charge); and
n = The number of emission units in the secondary aluminum processing unit.

(E) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.

(2) The Permittee shall prepare a written Operation, Maintenance, and Monitoring Plan and shall submit the plan to the applicable permitting authority for review and approval. Any subsequent changes to the plan shall be submitted to the applicable permitting authority for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:

(A) The process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each affected unit and control device.

(B) A monitoring schedule for each affected unit.

(C) Procedures for the proper operation and maintenance of each affected unit and control device used to meet the applicable emission limit in 40 CFR 63.1505.

(D) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(i) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and

(ii) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A.

(E) Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners, and if applicable, the procedures to be used for determining feed (or throughput) weight if a measurement device is not used.

(F) Corrective actions to be taken when process operating parameters or add-on control device parameters deviate from the value or range established in (A) above, including:

(i) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.

(G) A maintenance schedule for each affected unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(3) The Permittee shall inspect the labels for each affected unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible [63.1510(c)].

(4) For each reverbatory furnace [63.1510(i)]:

(A) Records shall be kept of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.

(B) If lime feeder setting is monitored, records shall be kept of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and corrective action taken.

(5) For each baghouse controlling emissions from a reverbatory furnace, the Permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A. The temperature monitoring system shall record the temperature in fifteen (15) minute block averages and calculate and record the temperature for each three (3) hour block period. The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n). The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternative reference approved by the Administrator. [63.1510(h)]

(6) The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, each furnace over the same operating cycle or time period used in the performance test. As an alternative to a measurement device, the Permittee may use a procedure acceptable to IDEM, OAQ to determine the total weight of feed or aluminum production for each affected unit. The accuracy of the weight measurement device or procedure shall be within one (1) percent of the weight being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months [63.1510(e)].

(7) The Permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system for each baghouse controlling emissions from the furnaces, scrap dryer, and scrap shredder [63.1510(f)].

(8) When the Permittee uses a continuous lime-injected fabric filter to comply with the requirements of 40 CFR 63, Subpart RRR, then the Permittee shall [63.1510(i)]:

(A) Verify that the lime (or other alkaline agent) is always free-flowing by inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period; or

(B) The Permittee shall also record the feeder setting once each day of operation.

(9) Pursuant to 63.1510(j), the Permittee shall:

(A) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of flux injected into each affected unit. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The

accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

(B) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test.

(C) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.

(D) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

Performance Tests

(1) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.

The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [63.1511(a)].

(2) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

Notifications

(1) Pursuant to 40 CFR 63, Subpart A, the Permittee must submit an initial notification to IDEM, OAQ upon startup of Reverbatory Furnaces #1 and #2. The initial notification shall contain:

(A) The name and address of the owner or operator;

(B) The address (i.e., physical location) of the emission units;

(C) An identification of the relevant standard, or other requirement, that is the basis of the notification and the date on which the source is required to be in compliance; and

(D) A statement indicating whether the source is a major source or an area source.

(2) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status reports no more than 60 days after March 24, 2003 for the Reverbatory Furnaces. The notification must be signed by the responsible official who must certify its accuracy. The report shall include:

(A) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each affected unit, including data, associated measurements, and calculations.

(B) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.

(C) Unit labeling as described in 40 CFR 63.1506(b), including process type or each affected unit classification and operating requirements.

(D) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., alkaline agent injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

(E) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for the capture/collection system required in 40 CFR 63.1506(c).

(F) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems required in 40 CFR 63.1510(f).

(G) Approved Operation, Maintenance, and Monitoring Plan.

(H) Startup, shutdown, and malfunction plan.

Reports

(1) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the emission limit. The Permittee shall keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during startup, shutdown, or malfunction is not consistent with the procedures in the startup, shutdown, and malfunction plan. The plan shall include [63.1516(a)].

(A) The procedures to determine and record the cause of a malfunction and the time the malfunction began and ended; and

(B) Corrective actions to be taken in the event of a malfunction of a process or control device , including the actions taken to correct the malfunction or minimize emissions.

(2) The Permittee shall submit a semi-annual report within 60 days after the end of each six (6) month period detailing all deviations from the Operation, Maintenance, and Monitoring Plan. When no deviations have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any following conditions occur [63.1516(b)]:

(A) An excursion of a compliant process or operating parameter value or range.

(B) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan.

(C) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

Records

The Permittee shall maintain files of all information, including reports and notifications, required by 40 CFR 63.10 and 40 CFR 63.1517. The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off-site. The Permittee may retain records on microfilm, computer disks, magnetic tape or microfiche.

In addition to the general records required by 40 CFR 60.10(b), the Permittee shall maintain:

(1) The number of total operating hours for the affected source or emission unit during each 6 month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.

(2) For each Group 1 each affected unit with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when 3-hour block average temperature exceeds the compliant operating parameter value +25 degrees F, with a brief explanation of the cause of the excursion and the corrective action taken.

(3) For each emission unit with emissions controlled by a lime-injected fabric filter:

(A) Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days.

If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken;

(B) If lime feeder setting is monitored, records of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and corrective action taken.

(4) For each Group 1 furnace, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid, or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(5) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(6) Records of any approved alternative monitoring or test procedure.

(7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(A) Startup, shutdown, and malfunction plan;

(B) Operation, Maintenance, and Monitoring Plan; and

(C) Site-specific secondary aluminum processing unit emission plan.

(8) For each secondary aluminum processing unit, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

The provisions of 40 CFR 63 subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 subpart RRR.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

Superior Aluminum Alloys was issued construction permit CP 003-9243-00286 on May 1, 1998 permitting the construction of two reverbatory furnaces, furnaces #1 and #2, a scrap dryer, and a scrap shredder. During the permit application review process, it was determined that the source was major for PSD for particulate matter, and minor for PSD for all other criteria pollutants . At the source's request, the permit included PM limits to classify the source as a PSD Minor source for all criteria pollutants.

On October 18, 1999, the source submitted a permit application for a Part 70 permit. While the permit application was under review, the source was issued SSM 003-11927-00286 on June 7, 2000 to permit the construction of three new furnaces, reverbatory furnaces #3, #4, and rotary furnace M. This modification indicated that the existing source, and the source after modification, had a limited potential to emit for any criteria pollutant of less than the 100 ton per year PSD threshold. NO_x PSD limits for the new furnaces were included to render the

requirements of PSD not applicable because the source expected to make more expansions to the plant at a later date.

In February, 2001, the draft Part 70 permit reviewer determined that several inappropriate emission factors were used, both in the original construction permit and source modification, to estimate the SO_2 emissions from the furnaces and the NO_x emissions from natural gas combustion. Once the valid emission factors were agreed upon and the emission calculations were completed, it was determined that the source had been a major source for PSD for NO_x since the submission of the construction permit application in 1998. The source was notified of the diagnosis and a PSD review was conducted to verify the determination and ascertain if the source had violated PSD requirements. Upon completion of the review, it was determined that the source had not violated PSD; the actual emissions from the source were less than the 100 ton per year threshold.

As a result of the inaccurate PSD determinations provided CP 003-9243-00286 and SSM 003-11927-00286, the respective PSD limits were reviewed, and modified as necessary, to successfully limit the source to less than 100 tons per year NOx in this Part 70 Source Modification. Therefore, in order to render the requirements of 326 IAC 2-2 (PSD) not applicable and in order that the entire source maintain minor PSD status, the emissions from the reverbatory furnaces #1 and #2 shall be limited as follows:

(a) The combined input of aluminum scrap to reverbatory furnaces #1, #2, #3, and #4 shall not exceed 300,000,000 pounds per rolling 12-month average.

(b) NOx emissions from reverbatory furnace #1 and #2 shall not exceed 0.25 pounds per tons of aluminum produced.

Compliance with these limits is necessary to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable.

326 IAC 6-3-2 (Process Operations)

Pursuant 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) emissions from the reverbatory furnace #1 and #2 shall not exceed 24 pounds per hour each when operating at a process rate of 14 tons per hour.

This limitation was calculated using the following equation:

$E = 4.1 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

Based on baghouse characteristics, the reverbatory furnace #1 and #2 can comply with 326 IAC 6-3-2 (Process Operations).

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This modification emits levels of hazardous air pollutants (HAPs) greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act. However, this source is subject to the provisions of 40 CFR 63 Subpart RRR (National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production). Therefore, the provisions of 326 IAC 2-4.1 are not applicable to this modification.

326 IAC 8-1-6 (New Facilities; general reduction requirements)

The two facilities covered by this permit (reverbatory furnaces #1 and #2) each have a potential to emit of less than twenty-five (25) tons of VOC per year. Therefore, 326 IAC 8-1-6 (New Facilities; general reduction requirements) does not apply.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The furnaces have applicable compliance monitoring conditions as specified below:

   (a) The Permittee shall record the total static pressure drop across baghouses E and F, used in conjunction with the furnaces, at least once per shift when any of the furnaces are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 4.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Failure to take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

   The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

   (b) An inspection shall be performed each calender quarter of all bags controlling the furnaces when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

   (c) In the event that bag failure has been observed.

      (1) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).

(2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Emergency Provisions).

(d) A quarterly summary of the weight of aluminum and flux material fed to the reverbatory furnaces shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Within 180 days after startup of the new furnaces, the Permittee shall perform stack tests as shown in the table below using methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. When testing baghouses E and F, reverbatory furnaces #1, and #2 shall be operated at 95% or more of their maximum design capacities.

Facilities to be tested	Pollutants to test
Baghouses E and F	PM, PM10, NOx, HCl, D/F

These monitoring conditions are necessary because the baghouse for the melting process must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 003-14739-00286.

Appendix A: Secondary Metal Production
Aluminum

Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
SSM #: 003-14739-00286
Reviewer: ERG/MP
Date: 10/16/01

Reverbatory Furnaces #1 and 2

SCC# 3-04-001-03
Charging/Melting

TYPE OF MATERIAL	Number of Units	Throughput (each furnace) LBS/HR	1 TON/2000 lbs	TON/HR (all units)
Aluminum	2	28000	2000	28

	PM * lbs/ton metal charged	PM10 * lbs/ton metal charged	SOx " lbs/ton metal charged	NOx *** lbs/ton metal charged	VOC ** lbs/ton metal charged	CO lbs/ton metal charged
	4.3	2.6	0.09	0.25	0.12	-
Potential Emissions lbs/hr	120.4	72.8	2.5	7.0	3.4	-
Potential Emissions lbs/day	2889.6	1747.2	60.5	168.0	80.6	-
Potential Emissions tons/year	527.4	318.9	11.0	30.7	14.7	-

SCC# 3-04-001-04
Fluxing/Chlorine (only for Reverbatory Furnaces)

TYPE OF MATERIAL	Number of Units	Throughput (each furnace) LBS/HR	1 TON/2000 lbs	TON/HR (all units)
Flux	2	1279.125	2000	1.279125

	PM * lbs/ton Chlorine	PM10 * lbs/ton Chlorine	SOx lbs/ton Chlorine	NOx lbs/ton Chlorine	VOC lbs/ton Chlorine	CO lbs/tons Chlorine
	1000	532	0.00	0.00	0.00	-
Potential Emissions lbs/hr	1279.1	680.5	0.0	0.0	0.0	-
Potential Emissions lbs/day	30699.0	16331.9	0.0	0.0	0.0	-
Potential Emissions tons/year	5602.6	2980.6	0.0	0.0	0.0	-

SCC# 3-04-001-14
Pouring/Casting

TYPE OF MATERIAL	Number of Units	Throughput (each furnace) LBS/HR	1 TON/2000 lbs	Total Throughput TON/HR (all units)
Aluminum	2	28000	2000	28

	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx * lbs/ton metal charged	NOx * lbs/ton metal charged	VOC * lbs/ton metal charged	CO lbs/tons metal charged
	--	--	0.02	0.01	0.14	-
Potential Emissions lbs/hr	0	0	0.56	0.280	3.920	-
Potential Emissions lbs/day	0	0	13.44	6.720	94.080	-
Potential Emissions tons/year	0	0	2.5	1.2	17.2	-
Controlled Potential Emissions (tons/yr)****	3.75	3.75	13.5	31.9	31.9	0.0

* Note: Emission factor is from FIRE version 6.01.

alum.wk4 7/95 updated 11/98

** Based on Reverbatory #3 compliance testing on 1/10/2000

*** Based on emission limit guaranteed by the manufacturer

**** Controlled PM emissions are based on grain loadings and volumetric flow rates from stack testing for furnaces #1, #2, and #3.

" Based on stack test conducted by Wabash Alloys on a similar process. This EF was used to estimate emissions from the furnaces in the original construction permit.

Emission factors which are not otherwise footnoted are from the permit application and have been accepted either via the orginial construction permit or from a test report used for draft NESHAP.

Appendix A: Secondary Metal Production
Aluminum
Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
SSM #: 003-14739-00286
Reviewer: ERG/MP
Date: 10/16/01

Superior Aluminum
Emission Spreadsheet

Reverbatory Furnaces Emissions - Points E, F, L (NESHAP CONSTITUENTS)

02/19/2000 - AS PROVIDED FROM SOURCE

Emissions Basis for Reverbatory Furnaces (4) (Charging/Melt, Holding, Melt Pots, Casting)

Maximum Scrap Aluminum Rate:	400,000	Lbs / 24 Hr Day (each)
	73,000	tons/year (each)
	3	8 Hr Batches / 24 Hr Day (each)
	133,333	Lbs / 8 Hr Batch (each)
	8.33	Tons/Hr (each)
	14	Tons/Hr (each) (maximum charge/melt rate)
Holding Area (4) Heat Input:	28	MMBTU/Hr (each)
Melt Pot burners (32) Heat Input:	1.5	MMBTU/Hr (each)
Stacks E, F, L Flow Rate:	60,000	ACFM (each)
Baghouse PM Efficiency:	99.83%	% Est. Based on the Reverbatory Furnace compliance testing on 3/25/99
Hours of Operation:	8760	Hr/Year

NESHAP Emission Factors	CAS	***Control Eff.		Controlled**	Units	Uncontrolled*
Antimony	7404	78.7	+	ND	Lbs/Ton	2.77E-03
Arsenic	7400	78.7		1.44E-04	Lbs/Ton	6.77E-04
Beryllium	7392	41.9		5.79E-05	Lbs/Ton	9.96E-05
Cadmium	7388	92.9		7.00E-05	Lbs/Ton	9.88E-04
Chlorine	7727	66.7		1.00E-03	Lbs/Ton	3.00E-03
Chromium	7390	97.3		3.03E-05	Lbs/Ton	1.13E-03
Hydrogen Chloride	7646	14.9		4.00E-01	Lbs/Ton	4.70E-01
Lead	7346	79.8		1.30E-03	Lbs/Ton	6.42E-03
Manganese	7338	44.7		1.83E-03	Lbs/Ton	3.31E-03
Mercury	7336	88.7		3.11E-05	Lbs/Ton	2.75E-04
Nickel	7438	94.6		4.10E-05	Lbs/Ton	7.59E-04
Selenium	7731	78.7	+	ND	Lbs/Ton	3.55E-04
Polychlorinated dibenzofurans total	N/A	77.7		7.14E-08	Lbs/Ton	3.20E-07
Polychlorinated dibenzo-p-dioxins total	N/A	77.7		7.14E-08	Lbs/Ton	3.20E-07

* Uncontrolled emission factors from test report used by USEPA for draft NESHAPS.
** Controlled emission factors from test report used by USEPA for draft NESHAPS.
*** Control Eff. = (Uncontrolled emission factor - Controlled emission factor) / Uncontrolled emission factor * 100.
+ Presumed same as arsenic

Reverbatory Furnace Potential Uncontrolled Emissions (NESHAP)

Emissions (Tons per Year) = Max. Scrap Aluminum Rate (Tons/Hr) X Emission Factor / 2000 X 8760

Antimony	=	0.34	Tons/Yr (furnaces #1 and #2)
Arsenic	=	0.08	Tons/Yr (furnaces #1 and #2)
Beryllium	=	0.01	Tons/Yr (furnaces #1 and #2)
Cadmium	=	0.12	Tons/Yr (furnaces #1 and #2)
Chlorine	=	0.37	Tons/Yr (furnaces #1 and #2)
Chromium	=	0.14	Tons/Yr (furnaces #1 and #2)
Hydrogen Chloride	=	57.64	Tons/Yr (furnaces #1 and #2)
Lead	=	0.79	Tons/Yr (furnaces #1 and #2)
Manganese	=	0.41	Tons/Yr (furnaces #1 and #2)
Mercury	=	0.03	Tons/Yr (furnaces #1 and #2)
Nickel	=	0.09	Tons/Yr (furnaces #1 and #2)
Selenium	=	0.04	Tons/Yr (furnaces #1 and #2)
Polychlorinated dibenzofurans total	=	0.00	Tons/Yr (furnaces #1 and #2)
Polychlorinated dibenzo-p-dioxins total	=	0.00	Tons/Yr (furnaces #1 and #2)
Total Potential To Emit	=	**60.07**	Tons/Yr (furnaces #1 and #2)

Appendix A: Emissions Calculations
Natural Gas Combustion: unit MM BTU/HR <100
Furnaces Holding Area Heating
Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
SSM #: 003-14739-00286
Reviewer: ERG/MP
Date: 10/16/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
56	490.56

Pollutants

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	1.86	1.86	0.15	12.26	1.35	20.60
Control: Baghouse at 99.83% efficiency Controlled Potential Emissions in tons/yr	0.003	0.003	0.15	12.26	1.35	20.60

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions
Furnaces and Melt Pot Heating

Company Name: **Superior Aluminum Alloys, L.L.C**
Address City IN Zip: **14214 Edgerton Road, New Haven, Indiana 46774**
SSM #: **003-14739-00286**
Reviewer: **ERG/MP**
Date: **10/16/01**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.151E-04	2.943E-04	1.840E-02	4.415E-01	8.340E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.226E-04	2.698E-04	3.434E-04	9.321E-05	5.151E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Secondary Metal Production
Aluminum

Company Name: Superior Aluminum Alloys, L.L.C
Address City IN Zip: 14214 Edgerton Road, New Haven, Indiana 46774
SSM #: 003-14739-00286
Reviewer: ERG/MP
Date: 10/16/01

Reverbatory Furnaces #1, #2, #3, and #4 (combined)

LIMITED PSD MINOR PRODUCTION

SCC# 3-04-001-03
Charging/Melting

TYPE OF MATERIAL		Limited Throughput (aggregate) LBS/YR	1 TON/2000 lbs	TON/YR (all units)		
Aluminum		411621070	2000	205810.535		
	PM * lbs/ton Produced	**PM10 * lbs/ton Produced**	**SOx " lbs/ton Produced**	**NOx *** lbs/ton Produced**	**VOC ** lbs/ton Produced**	**CO lbs/tons Produced**
	4.3	2.6	0.09	0.25	0.12	-
Potential Emissions tons/year	442.5	267.6	9.3	25.7	12.3	-
Controlled Emissions (tons/yr)****	3.8	3.8	9.3	25.7	12.3	-

SCC# 3-04-001-04
Fluxing/Chlorine (only for Reverbatory Furnaces)

TYPE OF MATERIAL	Number of Units	Throughput (each furnace) LBS/HR	1 TON/2000 lbs	TON/YR (all units)		
Flux	4	1279.125	2000	10030.84		
	PM * lbs/ton Chlorine	**PM10 * lbs/ton Chlorine**	**SOx lbs/ton Chlorine**	**NOx lbs/ton Chlorine**	**VOC lbs/ton Chlorine**	**CO lbs/tons Chlorine**
	1000	532	0.00	0.00	0.00	-
Potential Emissions tons/year	5015.4	2668.2	0.0	0.0	0.0	-
Controlled Emissions (tons/yr)****	3.8	3.8	0.0	0.0	0.0	-

SCC# 3-04-001-14
Pouring/Casting

TYPE OF MATERIAL		Limited Throughput (aggregate) LBS/YR	1 TON/2000 lbs	TON/YR (all units)		
Aluminum		411621070	2000	205810.535		
	PM lbs/ton metal charged	**PM10 lbs/ton metal charged**	**SOx * lbs/ton metal charged**	**NOx * lbs/ton metal charged**	**VOC * lbs/ton metal charged**	**CO lbs/tons metal charged**
	--	--	0.02	0.01	0.14	-
Potential Emissions tons/year	0.0	0.0	2.1	1.0	14.4	-
Controlled Emissions (tons/yr)****	3.8	3.8	2.1	1.0	14.4	-
TOTAL Limited Emissions	11.3	11.3	11.3	26.8	26.8	0.0

* Note: Emission factor is from FIRE version 6.01.

alum.wk4 7/95 updated 11/98

** Based on Reverbatory #3 compliance testing on 1/10/2000

*** Based on emission limit guaranteed by the manufacturer

**** Baghouses with a 99.83% control efficiency are used to control PM.

" Based on stack test conducted by Wabash Alloys on a similar process. This EF was used to estimate emissions from the furnaces in the original construction permit.

Emission factors which are not otherwise footnoted are from the permit application and have been accepted either via the orginial construction permit or from a test report used for draft NESHAP.